2014-2015 Frequently Asked Questions (FAQ)

Below are FAQ regarding the MAV Prize Challenge Rules. Team Leaders of registered teams may submit questions about the rules by emailing leigh.smith@ nasa.gov.

Updated 9/17/2014

Q1. Can you describe in more detail how the prize money could be distributed?

Prize money will be distributed based on the total points scored by the teams with the team having the highest number of total points being declared 1st place and awarded $25,000, second highest, 2nd place and awarded $15,000 and third highest 3rd place and awarded $10,000. In case of a tie the prize money will be split e.g. if there is a tie for first the two teams would split $40,000 with each receiving $20,000. Points will be accumulated as follows:

MAV Prize Scoring

Reviews:		Weighting			Points	Max Points
	PDR	See PDR scoring Rubric	5%		1500	75
	CDR	See CDR scoring Rubric	15%		1500	225
	FRR	See FRR scoring Rubric	5%		1500	75
	LRR	See LRR scoring Rubric	5%		1500	75
Competition:						
	Time	10 Minutes	5%	+1 point/sec < 10 minutes * 10	6000	300
	Size	6' x 6' x 6' Launch Box	30%	+1 point <6.0' and -1 point >6.0'; rounded up to nearest 0.5' *100	1800	540
	Weight	150 lbs	30%	+ 1 point for lbs less; - 1 point for lbs more ; lbs rounded up; *10	1500	450
	Altitude	3000 ft	5%	-1 point for each foot above or below 3000 ft	3000	150
Total			100%			1890

If a team receives a score of 1300 for each of the reviews and successfully launches their rocket and lands the payload with an Autonomous Ground Support Equipment (AGSE) that took 8 minutes 30 seconds to prep the rocket for launch, measured 5’6” x 3’ x 4’ 6”, weighed 110 lbs and reached an apogee of 2700’

Their score would be 840 points

- 65 pts for PDR (1300 * 0.05)
- 196 pts for CDR (1300 * 0.15)
- 65 pts for FRR (1300 * 0.05)
- 65 pts for LRR (1300 * 0.05)
- 45 pts for Time (600-510)*10 scale factor * 0.05
- 150 pts for Size (6 - 5.5 + 6 – 3 + 6 - 4.5) * 100 scale factor * 0.3
- 120 pts for Weight (150 - 110)*10 scale factor * 0.3
- 135 pts for Altitude (3000 - | 3000 – 2700 |) * 0.05

Q2. Where will the sample be placed in the launch pad during competition?
Each team may place their competition sample anywhere in the launch pad that is outside the outer mold lines of their rocket.

Q3. May we bring our own sample to the competition?
No. Each team will be given a regulation/competition sample to ensure standardization of the samples. The sample is described in 3.2.4.1 so each team may make their own sample for the purposes of design and test but may only use a competition sample that will be given to them the week of competition.

Q4. How much time will each team have for set up on launch day once the rocket and AGSE is at the launch pad?
Each team will have 15 minutes to set up their rockets and AGSE prior to the master switch being turned on.

Q5. After the rockets and AGSE are on the launch pad and the master switch is turned on (3.2.1.2), can the teams run through their procedures and subroutines to verify everything is working properly?
No, the competitors may verify that the robotic controller is up and running and ready to execute procedures and subroutines before they place the robot in a pause mode. They may not execute a "test" run to verify everything is working.

Q6. Do non-academic teams have to participate in the outreach portion of the activity?
No. While this task is certainly encouraged it is optional and is not part of any points or in any way contributes towards the awarding of the prize money.

Q7. Can we get an unofficial inspection before our official one?
Yes. Prior to LRR your rocket/AGSE your team may request an unofficial inspection. An inspector will review your rocket/AGSE for compliance and attempt to answer any questions you may have. A scale will also be available during this time. While these inspections are not final, our goal is to help make sure that every team that arrives with a rocket/AGSE is compliant with the rules and that does not stop them from competing.

Q8. What happens if the AGSE does not start/function properly during competition?
See 3.2.1.6 for allowing the team to do a reset and rerun an attempt. No modifications to the HW or SW is allowed prior to a rerun during the competition. If a reset and rerun attempt does not fix the problem the team may be allowed to compete in the Mini-MAV portion of the competition if the team is an academic team and meets all of the requirements for the Mini-MAV competition. If the rocket meets all safety requirements but does not fulfill all of the challenge requirements, the team can elect to launch their rocket but will be disqualified from receiving any challenge prize awards.

Q9. Can my AGSE have wheels or otherwise be mobile?
There are no restrictions on the AGSE other than in 3.1.2.3 and 3.1.3. The AGSE will have to be brought out to the launch pad by each team. It is up to each team if the AGSE is to be hand carried or mobile.

Q10. Will points be counted off if the payload is not jettisoned at exactly 1000 feet?
No. The points for altitude precision is for reaching apogee only. While it is a requirement that the payload be jettisoned at 1000 feet, points will not be subtracted if this is not exact. However, if the payload is not jettisoned, this will disqualify a team from being potentially awarded a MAV prize.